

West Nile Virus (WNV) Fact Sheet for Physicians

Current situation: In mid-June of 2002, West Nile virus (WNV) was first reported in Texas in blue jays in the eastern portion of the state. Since then, positive tests/cases have been reported in mosquitoes, birds (such as blue jays and crows), horses, and humans. There has also been a continued westward movement of the virus.

Species affected: The first reported human case of WNV in the United States occurred in New York in 1999. Equines appear to be the only domestic animal adversely affected by West Nile virus. The virus may infect other domestic animals, but they do not show any clinical signs. Some wild birds develop severe clinical signs and may have large-scale die offs. Zoo birds such as flamingoes may also be affected. There is no evidence that the virus adversely affects emus or other ratites.

Transmission: Equine species appear to be a dead-end host and are not involved in transmission of the virus; however, there is a vaccine available for equines. Migrating birds are the primary source of the virus, which is transmitted from them to humans and other animals by mosquitoes.

Symptoms: Most people infected with WNV are asymptomatic. A minority develop meningitis or encephalitis, which can be fatal. Symptoms include fever, weakness, headache, and altered mental status. Skin rash, lymphadenopathy, conjunctivitis, abdominal pain, cough, dyspnea, and diarrhea may also be present.

Diagnosis: Laboratory confirmation of WNV is based on isolating virus from or demonstrating antigen or genomic sequence in tissue, blood, or CSF; demonstrating IgM antibody to WNV in CSF; demonstrating a 4-fold serial change in antibody titer to WNV in paired, acute, and convalescent serum samples obtained at least 2 weeks apart; or detecting both WNV-specific IgM and IgG antibody in a single serum specimen.

Physicians statewide should contact their Texas Department of Health Regional office or the Texas Department of Health Zoonosis Division at 512-458-7255 concerning symptomatic patients prior to inquiry about test availability and specimen submission. Houston-area physicians can contact the Houston Department of Health and Human Services Bureau of Laboratories at 713-794-9181 for this information. Diagnostic specimens of symptomatic patients should be sent to the TDH laboratory for serologic testing and confirmation. Specimens **will not** be accepted for asymptomatic patients.

Prevention: Advise patients to eliminate mosquito breeding sites near their homes and in their neighborhoods (for example, empty or dispose of cans, containers, and old tires that hold water; change water in pet dishes, swimming pools, and birdbaths several times a week; and cover trash containers so they do not collect water); make sure screens on doors and windows are in good condition; and avoid mosquito bites by wearing long sleeves and pants when outside and using repellants such as DEET.

Contacts: For additional information on WNV, contact the Texas Department of Health Infectious Disease Epidemiology and Surveillance Division at 512-458-7676 or the Zoonosis Control Division at 512-458-7255. Information can also be obtained at <http://www.tdh.state.tx.us/zoonosis/diseases/arboviral/westnile/westnile.asp>. Information for physicians on surveillance, prevention, and control can be found on the Centers for Disease Control and Prevention's website at <http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>.